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10/666,606

09/17/2003

Yu-Chih Cheng

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EXAMINER

NGUYEN, KEVIN M

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/666,606 | Applicant(s) CHENG, YU-CHIH | |
| | Examiner Kevin M. Nguyen | Art Unit 2674 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 20 and 21 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>9/23/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

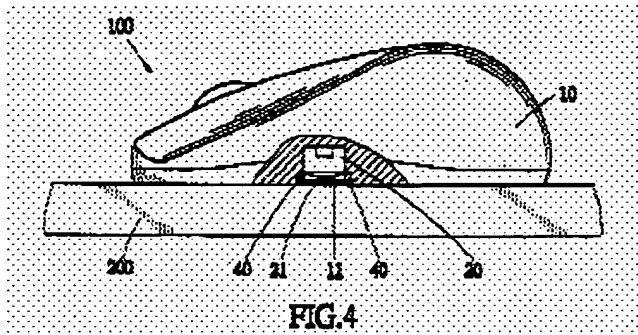
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

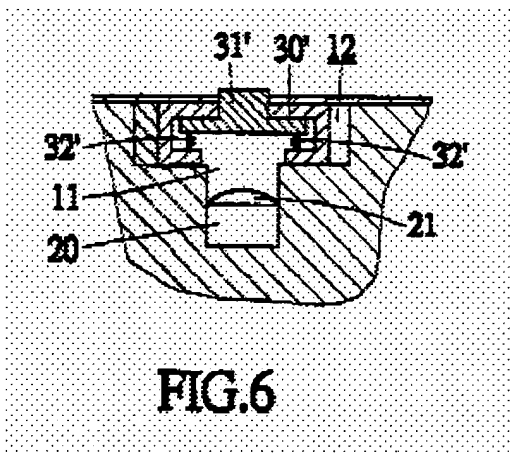
2. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuan (US 6,762,751).

3. As to claim 1, Kuan teaches a third embodiment of a dual mode input device [100, Fig. 4] performing data input function by a moving action in a first mode [a forward moving mode, Fig. 4, col. 4, lines 27-30], and performing data input function by a manipulating operation on an input element in a second mode [a rearward moving mode, Fig. 6, col. 4, lines 27-30], comprising:

a main body [a body 10, Fig. 4] having a sensor window [an optical sensing 20, fig. 5] on a surface thereof [a surface of a bottom of the mouse 100, col. 4, line 11-12], said sensor window moving relative to a plane [a mouse pad 200, fig. 4] to perform data input function in said first mode [the forward moving mode, see Fig. 4, col. 3, lines 40-57];



a supporting member [a cavity 11 and a channel 12, Fig. 6] arranged on said surface of said main body [the body 10, Fig. 4] for accommodating therein said input element [a button 31', fig. 6], said input element moving relative to said sensor window [a user may move the panel 30' including the button 31' within the channel 12 between the ends whereby the panel detection element 40 may be selectively engaged by the panel 30' col. 4, lines 26-28] to perform data input function in said second mode [col. 3, lines 3-7]. It is noted that the third embodiment [Fig. 6] is similar to the second embodiment and the first embodiment [Fig. 5, col. 4, lines 31-33, and col. 2, lines 28-38].



4. As to claim 2, Kuan teaches wherein said supporting member is detachably arranged on said surface of said main body and disposed over said sensor window in said second mode [col. 3, lines 23-25].

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5. As to claim 3, Kuan teaches wherein said supporting member [the panel 30] is separable from said main body [the body 10] in said first mode, and secured onto said surface [the surface, col. 4, line 11-12] of said main body in said second mode [col. 3, lines 23-25].

6. As to claim 4, Kuan teaches a securing member [a panel detection element 40, Fig. 3] for securing said supporting member onto said surface of said main body [a panel detection element 40 are mounted to the body 10 for detecting the presence of the panel 30, col. 3, lines 24-25].

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

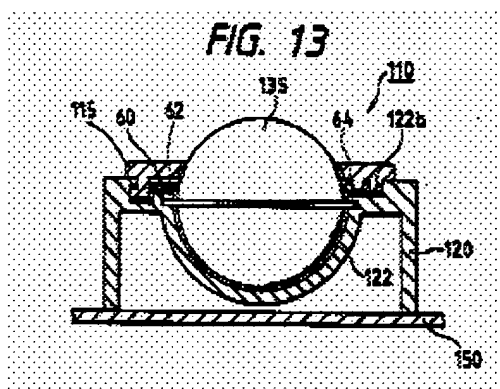
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuan in view of Tooi (US 5,448,023).

Kuan teaches all of the claimed limitation of claim 1, except wherein said supporting member substantially has a hollow semi-spherical shape.

However, Tooi teaches related trackball coordinate data inputting device which includes said supporting member [a ball holder 60, Fig. 13]. It would have been obvious to recognize that the ball holder 60 in Fig. 13 substantially has a hollow semi-spherical shape.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Kuan's panel 30 corresponding to the supporting member as claimed to become the ball holder 60 substantially having a hollow semi-spherical shape as taught by Tooi in order to achieve the benefit of the ball holder may be replaced by other means (Tooi, col. 10, lines 66-67), and the track ball unit can be operated with high efficiency and with high accuracy (Tooi, col. 10, lines 65-66), because this would improve the operability and the detecting accuracy of the input device (Tooi, col. 3, line s 41-42), while improving the assembling efficiency and manufacturing cost of the input device (Tooi, col. 3, lines 46-47).



9. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuan in view of Sun et al (US-PGPUB 2004/0095322).

As to claim 20, Kuan teaches all of the claimed limitation of claim 1, except wherein said input device is an optical mouse in said first mode and an optical trackball in said second mode.

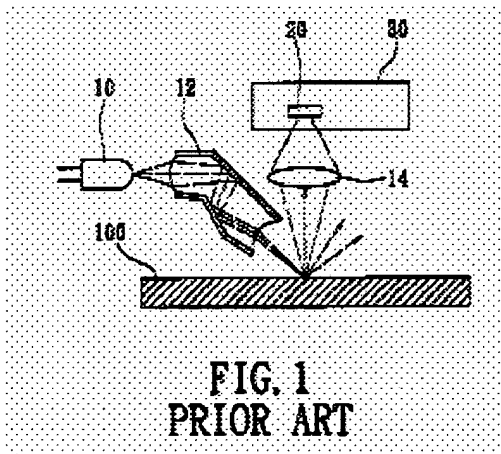
However, Sun et al disclose a conventional optical mouse is operated on a work surface in the first mode (see fig. 1, paragraph 5). Sun et al further teaches dual-mode

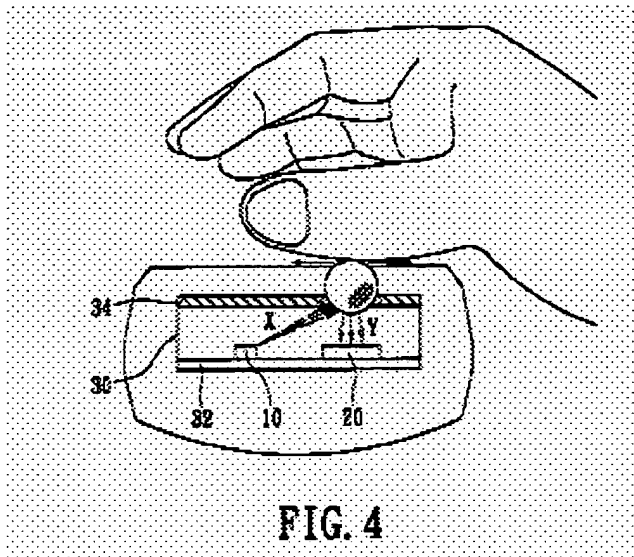
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mouse device (paragraph 9) which includes and an optical trackball (40, fig. 4) in the second mode (see paragraph 23).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Kuan's conventional optical mouse in the first mode including the optical track ball (40) in the second mode taught by Sun et al, because this would provide the optical mouse with higher light transmission efficiency and low cost (see Sun et al, paragraph 7).

As to claim 21, Sun et al further teach wherein said input element is a trackball (40, Fig. 3) and rotated and rotated to move relative to said sensor window (20, Fig. 4) to perform data function in said second mode [see paragraphs 21 and 23].



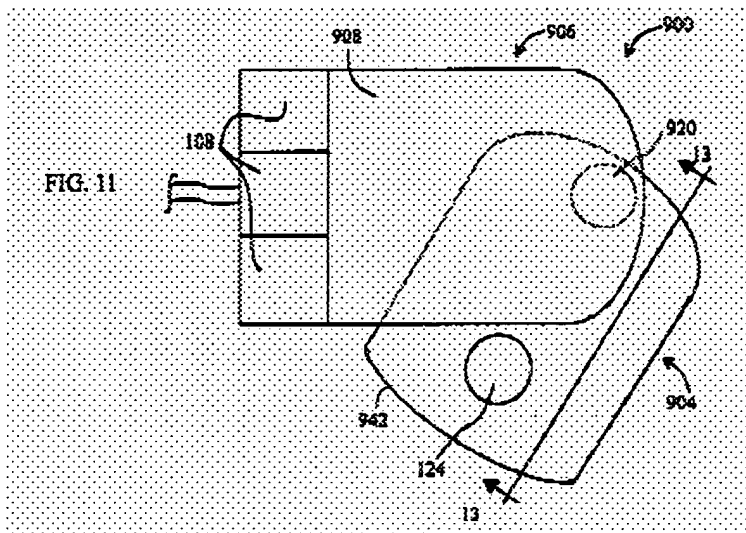


Allowable Subject Matter

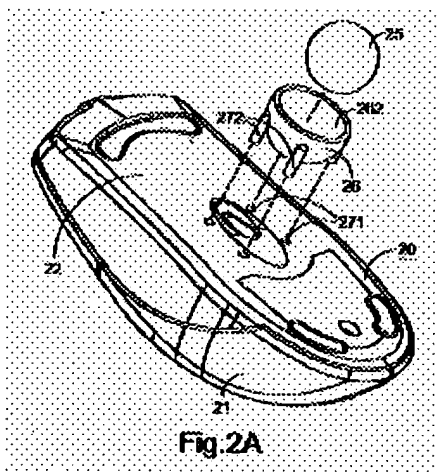
10. Claims 5, 6 and 8-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is an examiner's statement of reasons for allowance:

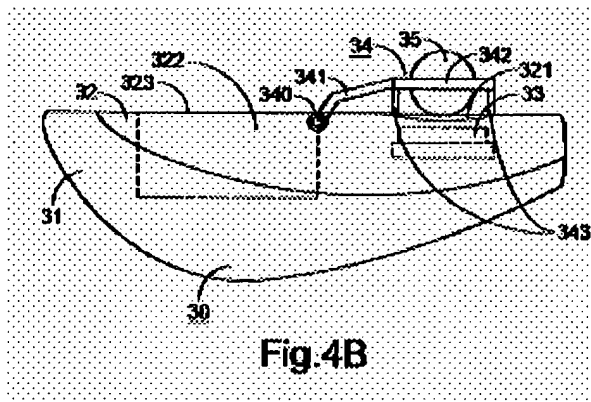
The present invention is directed to a dual mode input device (see claim 1). The closest prior art, Wang (US 6,580,420) discloses an input device 100 can be used either as a mouse or as a trackball (see fig. 1, col. 9, lines 15-17). Wang further discloses the input device 900 having a ball-carrying member 904 which is pivotally attached to an outer housing 906 (see fig. 11, col. 9, lines 50-52).



The improvement of the dual mode input device comprising: wherein said securing member comprises: a plurality of positioning holes arranged on said surface of said main body around said sensor window; and a plurality of pins coupled said supporting member and having positions corresponding to said plurality of positioning holes, respectively, said plurality of pins being inserted into said plurality of positioning holes to secure said supporting member onto said surface of said main body over said sensor window in said second mode (see Cheng, Fig. 2A).



Or the improvement of the dual mode input device comprising: wherein said supporting member is pivotally connected to said surface of said main body, and pivoted to hide inside said main body in said first mode and sit over said sensor window in said second mode (see Cheng, Fig. 4B). This patentable distinction is included in all independent claim 1.



Conclusion

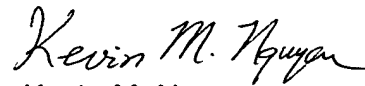
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Nguyen whose telephone number is 571-272-7697. The examiner can normally be reached on MON-THU from 8:00-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, a supervisor Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the Patent Application Information Retrieval system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KMN
March 13, 2006